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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte RAJESH CHAWLA and STEVE OLSON

Appeal 2009-004220
Application 10/707,471
Technology Center 2100

Decided: March 15, 2010

Before JOHN A. JEFFERY, HOWARD B. BLANKENSHIP, and
JAMES R. HUGHES, *Administrative Patent Judges*.

JEFFERY, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's rejection of claims 1-55. We have jurisdiction under 35 U.S.C. § 6(b). We affirm.

STATEMENT OF THE CASE

Appellants invented an automatic and transparent mapping of data retrieved from Simple Object Access Protocol (SOAP) operations into relational database management systems. Relational operations can be performed over relational data and data retrieved from SOAP operations. *See generally* Spec. ¶¶ 0013-14. Claim 1 is illustrative:

1. A method for performing database operations on data obtained from a web service, the method comprising:

creating at least one proxy table in a database, each proxy table mapping to a method of the web service;

generating meta data about the mapping and storing the meta data in a database table of the database;

in response to a database operation on a particular proxy table, using the meta data for converting the database operation into a format for invoking a particular method of the web service based upon the corresponding mapping;

invoking the particular method of the web service;

converting results obtained from invoking the particular method into data for use at the database based upon the corresponding mapping;

performing the database operation on the data at the database to generate a result set; and

returning the result set in response to the database operation.

The Examiner relies on the following as evidence of unpatentability:

Brown

US 2003/0093436 A1

May 15, 2003

(filed Sept. 28, 2001)

O'Farrell	US 2005/0044164 A1	Feb. 24, 2005 (filed Dec. 23, 2003 and claiming priority to Provisional App. Nos.: (a) 60/436,230, filed Dec. 23, 2002; (b) 60/442,810, filed Jan. 23, 2003; and (c) 60/461,588, filed Apr. 7, 2003)
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THE REJECTION

The Examiner rejected claims 1-55 under 35 U.S.C. § 103(a) as unpatentable over Brown and O'Farrell. Ans. 3-17.¹

CLAIM GROUPING

Appellants argue claims 1-55 together as a group. *See* App. Br. 7-15. Accordingly, we select claim 1 as representative of that group. *See* 37 C.F.R. § 41.37(c)(1)(vii).

Regarding representative claim 1, the Examiner finds that Brown teaches all the limitations, except for: (1) generating meta data about the mapping; (2) storing the meta data in a database table of the database; and (3) using the meta data for converting the database operation into a format for invoking a particular method of the web service based upon the corresponding mapping. Ans. 3-5. The Examiner relies on O'Farrell to teach these limitations and provides a reason for combining the references. Ans. 5.

¹ Throughout this opinion, we refer to (1) the Appeal Brief filed November 14, 2007 and (2) the Examiner's Answer mailed February 6, 2008.

Appellants argue the claimed invention is different from Brown and O'Farrell. App. Br. 8. In particular, Appellants argue the following features are found in claim 1 and not taught by the cited art: (1) the system automatically creates proxy tables and mappings given a Web Services Description Language file describing the Web Service; (2) meta data about the web services' mapping are automatically generated and stored in the system tables; and (3) using the meta data when a database operation on the proxy table representing the web service is received to map the relational data types to the appropriate representation. App. Br. 8-10, 12 and 13.

Appellants further contend that Brown's mapping information (i.e., Document Access definition (DAD) file) is stored external to the database rather than in the database as claimed. App. Br. 9-10. Appellants also argue O'Farrell: (1) fails to teach the meta data invokes a web service method and instead maps client data fields to back-end data source data fields and (2) maps the meta data to a server or intermediary that is not required by the invention. App. Br. 11-13. Finally, Appellants argue that O'Farrell does not qualify as prior art. App. Br. 13-15.

The issues before us, then, are as follows:

ISSUES

(1) Have Appellants demonstrated that the Examiner erred in finding O'Farrell qualifies as prior art under § 102(e) with respect to the present application?

(2) Under § 103, has the Examiner erred in rejecting claim 1 by finding that Brown and O'Farrell collectively would have taught or suggested:

(a) creating a proxy table in a database, each proxy table mapping to a web service's method;

(b) generating meta data about the mapping and storing the data in a database table of the database; and

(c) using the meta data for converting the database operation into a format that invokes a web service method in response to the database operation?

FINDINGS OF FACT

1. The filing date of the present application is December 16, 2003.
2. The application claims benefit under 35 U.S.C. § 119(e) to Provisional Application No. 60/320,009, filed March 14, 2003.
3. O'Farrell was filed on December 23, 2003.
4. O'Farrell claims the benefit under 35 U.S.C. § 119(e) to Provisional Application Numbers: (a) 60/436,230, filed December 23, 2002; (b) 60/442,810, filed January 23, 2003; and (c) 60/461,588, filed April 7, 2003.

PRINCIPLES OF LAW

Section 119(e)(1) of the Patent Act states:

[a]n application for patent filed under section 111(a) or section 363 of this title for an invention disclosed in the manner provided by the first paragraph of section 112 of this title in a provisional application filed under section 111(b) of this title, by an inventor or inventors named in the provisional application, shall have the same effect, as to such invention, as though filed on the date of the provisional application filed under section 111(b) of this title

ANALYSIS

QUALIFICATION OF O'FARRELL AS PRIOR ART

At the outset, we turn to the threshold issue of whether Appellants have demonstrated that O'Farrell does not qualify as prior art for purposes of the present application. Appellants filed the present application on December 16, 2003 and claim priority to Provisional Application No. 60/320,009, filed March 14, 2003. FF 1 and 2. Thus, the earliest effective filing date accorded to the subject matter in the present application, including the claimed subject matter, is March 14, 2003.

O'Farrell was filed December 23, 2003. FF 3. However, the 35 U.S.C. § 102(e) critical reference date of a patent publication entitled to the benefit of the filing date of a provisional application under 35 U.S.C. § 119(e) is the filing date of the provisional application if the provisional application properly supports the subject matter relied upon to make the rejection in compliance with 35 U.S.C. § 112, first paragraph. *See* Manual of Patent Examining Procedure ("MPEP") § 2136.03(III) (8th ed., Rev. 6, Sept. 2007). O'Farrell claims the benefit of three provisional applications, two of which have filing dates earlier than March 14, 2003. *See* FF 4. That is, Provisional Application No. 60/436,230 was filed December 23, 2002 and Provisional Application No. 60/442,810 was filed January 23, 2003. The critical reference date for O'Farrell therefore is: (1) December 23, 2002 for subject matter in O'Farrell's publication having §112, first paragraph support in Provisional Application No. 60/436,230 and (2) January 23, 2003 for subject matter in O'Farrell's publication having §112, first paragraph support in Provisional Application No. 60/442,810.

The Examiner relies on pages 10, 15, 18, and 19 of Appendix B (entitled “Dexterra Mobile Enterprise Platform ‘Powering Mobile Enterprise Applications’ Executive Summary”) in Provisional Application No. 60/442,810 (hereafter Provisional ‘810), filed January 23, 2003, to find § 112, first paragraph support for the subject matter relied upon in O’Farrell (Ans. 5) in making the obviousness rejection. *See* Ans. 27 and Advisory Action, mailed October 29, 2007. Although the Examiner’s statement regarding the correspondence between O’Farrell and its underlying provisional application is terse, the Examiner nonetheless found that both documents show the same subject matter. Additionally, pages 7 and 8 in Appendix B show an Architecture Blueprint with a server that stores and manages meta data. Having made these factual findings, the burden shifts to Appellants to show why such factual findings are erroneous. *See Ex parte Yamaguchi*, 88 USPQ2d 1606, 1613 (precedential).

In response, Appellants argue that the Examiner’s reliance on page 10 in Provisional ‘810 is *different from the claimed invention*, including failing to mention generating meta data, storing the meta data in the database table, and using the stored meta data to convert a database operation into a format for invoking a method of a web service. App. Br. 14-15. However, to show O’Farrell does not qualify as prior art, Appellants must demonstrate that Provisional ‘810 does not reasonably support *the relied-upon features of O’Farrell* (Figure 3 and ¶¶ 0012, 0074, and 0076) in formulating the obviousness rejection. *See Yamaguchi*, 88 USPQ2d at 1613. Appellants have not presented evidence that the cited portions of O’Farrell are not supported in Provisional ‘810. *See* App. Br. 14-15.

Additionally, identity of terms or figures is not required to demonstrate the Provisional '810 supports the portions of O'Farrell relied upon by the Examiner. *See Yamaguchi*, 88 USPQ2d at 1613. Thus, while there are differences between Provisional '810 and O'Farrell, the Examiner presents evidence that the portions of O'Farrell discussed by the Examiner in formulating the art rejection are reasonably supported by Provisional '810 as January 23, 2003. *See Ans. 27*. Moreover, mere conclusory statements (e.g., "the above text in the provisional application makes no mention whatsoever of generating meta data or storing meta data in a database table" (App. Br. 14-15)) hardly persuades us of error in the Examiner's factual findings pertaining to O'Farrell and its provisional applications.

For the above reasons, Appellants have not shown the Examiner erred in determining O'Farrell qualifies as prior art.

ADDITIONAL FINDINGS OF FACT

Brown

5. Brown discloses automatically generating web service operations, including (1) eXtensible Mark-Up Language (XML)-based query or storage and (2) Structured Query Language (SQL)-based queries. ¶¶ 0006, 0008, and 0043.

6. Brown states XML-based query or storage involved decomposing or breaking an XML document into parts for storage in the DB2 relational tables. Relational data of the XML document is stored in tables 38 (not shown) of database 29. ¶¶ 0043-44; Fig. 3.

7. Brown discusses part of the underlying support for composition of XML documents 35 from relational data stored in tables 38 and breaking the XML document 35 into its components parts and stored into relational table 38 is provided by DB2 XML Extender. ¶¶ 0044; Fig. 3.

8. Brown explains the input into both storage and retrieval is the user-specified mapping file called a Document Access Definition (DAD) 37.

¶¶ 0045.

9. Web service operation SQL-based query does not require the use of the XML Extender and uses data in the database 29. ¶¶ 0043, 0046, 0047, 0049.

10. Brown teaches storing data about web services in database tables 38 and converting a database operation into a format for invoking a particular method of the web service (e.g., SQL-based query to invoke DB2 stored procedures) based upon the table's mapping. ¶¶ 0049 and 0054-63.

11. Brown teaches the Document Access Definition Extension (DADX) configuration file defines operations that can be performed by the web service, such as find all orders for a part. ¶¶ 0027 and 0050.

O'Farrell

12. O'Farrell teaches a Connector interface having multiple enterprise data sources (e.g., 302, 304, 306, 308, 310) or other web services, a server 314 with metadata 312, and a client 316. The metadata 312 includes a data source's data definition mapped to views used to create the data on the client side. For example, Order_ID from a data source is mapped to a business object OrderID whose definition is stored in metadata 318 on the mobile client 316. ¶¶ 0074 and 0076; Fig. 3.

13. O’Farrell teaches delivering data from different enterprise data sources to a mobile client through web services in a proper format for access using the business objects on the mobile client 316. ¶¶ 0074, 0076.

14. O’Farrell teaches fully integrating applications and data so the device has greater functional capabilities. ¶ 0009.

ADDITIONAL PRINCIPLES OF LAW

Attacking references individually does not show nonobviousness where rejections are based on combinations of references. *In re Merck & Co., Inc.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986).

REJECTION BASED ON BROWN AND O’FARRELL

We find no error in the Examiner’s obviousness rejection of representative claim 1. First, we agree with the Examiner (Ans. 20) that many of the arguments made by Appellants are not commensurate with the scope of claim 1. For example, Appellants argue that the following claimed features are not taught by the cited art: (1) the system automatically creates proxy tables and mappings given a Web Services Description Language file describing the web service; (2) meta data about the web services’ mapping are automatically generated and stored in the system tables; and (3) using the meta data when a database operation on the proxy table representing the web service is received to map the relational data types to the appropriate representation. App. Br. 8-10, 12 and 13.

Claim 1 recites, “creating at least one proxy table in a database, each proxy table mapping to a method of the web service.” There is no limitation of “automatically” creating and mapping or a limitation to a Web Services

Description Language file. Claim 1 also recites, “generating meta data about the mapping and storing the meta data in a database table of the database” but not *automatically* generating and storing in a system’s table. Lastly, while claim 1 recites “in response to a database operation on a particular proxy table, using the meta data for converting the database operation into a format for invoking a particular method of the web service based upon the corresponding mapping,” claim 1 does not require mapping relational data types to the appropriate representation.

Second, Appellants contend that neither Brown nor O’Farrell teach creating a proxy table that maps to a method of web service in a database or storing mapped information in a database. App. Br. 9, 10, and 13. Appellants argue that Brown maps information to a DAD file that is external to the database. App. Br. 9-10. Brown discloses providing web service operations, including XML-based query or storage. FF 5. Brown states the XML document is decomposed for storage in the DB2 relational tables. FF 6. Such relational tables 38 (not shown) store data of the XML documents related to an XML-based query operation *within database* 29. *Id.* Thus, Brown clearly teaches some relational data mapping to a web service (e.g., XML-based query) is stored in the database as relational or proxy tables.

Even assuming, without deciding, that XML Extender is external to the database where the proxy table is located, Brown discusses using DB2 XML Extender *partly* to perform the store and retrieve operations of a XML document 35 broken down into components. FF 7-8. That is, at best, the user-specified mapping file 37 partly performs the function of the XML-base query. FF 7. Additionally, another web service operation (e.g., SQL-based

query) does not require the use of the XML Extender and relies on data in the database 29. *See* FF 9. Thus, some web service operations use only the data mapped in the tables of the database. *See* FF 7-9.

Third, Appellants contend that O'Farrell fails to teach using the meta data for converting a database operation into a format for invoking a web service based on the mapping. App. Br. 11-12. Particularly, Appellants argue that O'Farrell teaches mapping the client device's data fields to back-end data source's data fields, and does not use the meta data for converting a database operation into a format for invoking a particular web service's method based upon the mapping. However, the Examiner relies on the combined teaching of Brown and O'Farrell to teach this step. *See* Ans. 4-5. Attacking references individually does not show nonobviousness where rejections are based on combinations of references. *Merck*, 800 F.2d at 1097.

Brown stores data about web services in tables of databases and converts a database operation into a format for invoking a particular method of the web service (e.g., SQL-based query to invoke DB2 stored procedures) based upon the table's mapping. *See* Ans. 4; FF 10. Thus, O'Farrell has primarily been cited to teach generating meta data of a table's mapping and using the meta data to invoke a web service based on the mapping. *See* Ans. 5. Combining Brown's teaching for storing data about web service operations within tables with O'Farrell's teaching to generate meta data about mapping (FF 12) would have predictably yielded storing meta data within Brown's relational database so that the combined system fully integrates applications and data and increases the system's functional capabilities (FF 14). *See KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 416

(2007). Given the background knowledge possessed by an ordinarily skilled artisan, we see no reason why an artisan would not have similarly stored such meta data in the combined Brown/O'Farrell system within the same database so as to integrate all the data in a compatible format (FF 13-14) and for efficiency. *See id.* at 418.

Also, as the Examiner suggests, O'Farrell's mapping of meta data to business objects can substitute for some of the DADX file's mapping. *See* Ans. 5. For example, Brown teaches the DADX file includes an operation, such as find all orders for a part (FF 11), and O'Farrell teaches generating the meta data related to Order_ID data of a data source or web service 302. FF 12. Thus, when Brown and O'Farrell's teachings are combined, an ordinarily skilled artisan would have recognized using O'Farrell's meta data (e.g., ORDER_ID), at least partially, to assist in invoking a particular web service method (e.g., find all orders for a part for enterprise data source or web service 302) based upon mapping. We are therefore not persuaded that Brown and O'Farrell collectively fail to teach or suggest using meta data for converting a database operation into a format for invoking a web service method based upon the mapping.

For the foregoing reasons, Appellants have not shown error in the obviousness rejection of independent claim 1 based on Brown and O'Farrell. We will therefore sustain the rejection of claim 1 and claims 2-55, which fall with claim 1.

CONCLUSION

The Examiner did not err in rejecting claims 1-55 under § 103.

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ORDER

The Examiner's decision rejecting claims 1-55 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

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